MULTI-BEVELED POINT NEEDLE AND SYRINGE HAVING A MULTI-BEVELED POINT NEEDLE

ABSTRACT

A syringe assembly including a needle cannula having a five-beveled point and a needle shield formed of a styrene block poly(ethylene/butylene) thermoplastic elastomer which significantly reduces needle penetration force and may reduce the cycle time for gas sterilization. The multi-beveled needle cannula point includes a primary bevel, a pair of tip bevels and a pair of middle bevels each intermediate the primary bevel and a respective tip bevel, wherein the angles of rotation of the primary bevel and the intermediate bevels are substantially equal resulting in reduced heights of intercepts between the bevels, therby reducing needle penetration force. The needle shield maintains the sharpness of the needle cannula during application, sterilization and removal of the shield and it is believed that the needle shield will also reduce the cycle time of gas sterilization as compared to rubber needle shields and vulcanizate thermoplastic elastomers.